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EXAMINER

GOODMAN, CHARLES

ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 31

Application Number: 09/053,832
Filing Date: April 01, 1998
Appellant(s): OWENS, WILLIAM M.

Benjamin J. Hauptman
For Appellant

EXAMINER'S ANSWER

MAILED
NOV 30 2005
Group 3700

This is in response to the appeal brief filed August 7, 2003.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect. The Brief states that a response had been concurrently filed with the brief, but none is in the file.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

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(7) Grouping of Claims

Appellant's brief includes a statement that claims 15-32 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,637,068	CHAMBERS	06-1997
4,449,958	CONRAD	05-1984
4,681,005	BARANSKI	07-1987
4,009,741	ZIMMERMAN	03-1977

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 15, 18-22, and 25-32¹ stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chambers in view of Conrad and Baranski.

Chambers discloses the invention substantially as claimed except that Chambers does not show a pair of input-side and output-side pulleys for the input conveyors (10) and the output conveyors (20) although it appears that such an arrangement is inherent. Chambers also lacks a groove and strip.

¹ The Board's attention is respectfully directed to the fact that the Examiner erroneously did not include claim 22 in the rejection in the last Office Action. This has been noted in order to avoid any confusion.

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Initially it is noted that as per the last Office Action, belts with notch grips has been disclosed as a commercially available belt.² For this reason alone, this feature is obvious.

In the alternative, Conrad teaches a conveyor having a pair of input-side and output-side pulleys (note e.g., the pulleys 12, 14) an endless belt having a non-skid surface (e.g. rubber surface) wherein the belt (e.g. 26, 28) includes guide strips (e.g. each longitudinal row or projections 34) having V-shaped notches (these notches defined by the spaces between the notches as shown, e.g., in Fig. 7), wherein each strip has two side faces (e.g. the sides denoted by the walls on pyramids 42) and a top face (e.g. 46), the side faces tapering away from the opposing surface and ending at the top face, the notches distributed longitudinally of the endless belt and extending at the top face toward, without contacting with the opposing surface, and a pulley (e.g., 12, 14, 76) having annular grooves (e.g. 24 in Fig. 1 and the groove being defined between the annular rings 82 in Fig. 6), the grooves having a shape conforming to the shape of the strips, for the purpose of positively maintaining tracking of the belt. See Figs. 1, 2, 6-7, and 9a-b for comparison of endless belt and respective pulleys, c. 1, ll. 61-65, c. 3, ll. 4-48, and c. 4, ll. 45-58. In addition, due to the fact that the guide strips are not continuous, i.e. the notches break the continuity of the individual strip, it appears that this arrangement also maximizes the flex of the belt during movement around the respective pulleys. Moreover, Baranski teaches that it is well known in the sawing art to employ an endless belt conveyor having a guide strip in the belt and a groove in the pulley. More specifically, Baranski teaches conveyor comprising a pair of input side and

² See e.g., specification, p. 3, ll. 14-27.

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output side pulleys (126, 128), an endless belt having a non-skid upper surface and a guiding strip (156), the pulleys each having a circumferential groove (122, 124) sized and shaped to match the strip, wherein the belt positively feeds material through a processing unit without any lateral deviation of the belt due to the strip riding in the grooves. See Figs. 4-5, c. 4, ll. 22-68. Thus, it would have been obvious to the ordinary artisan at the time of the instant invention to provide the device of Chambers with the input-side and output-side pulleys, the endless belts having a guide strip with V-shaped notches, and each of the pulleys having a groove as taught and suggested by Conrad and Baranski in order to facilitate positive tracking of the belt and thereby the work to be cut wherein the belt exhibits enhance training around the respective pulleys due to the notches thereon.

Regarding claims 28-29, the modified device of Chambers discloses the invention substantially as claimed except for a work bed. However, Baranski also teaches a work bed (114) disposed immediately below a portion of the endless belt having another groove (120) also sized and shaped to match the strip for the inherent purpose of assisting in supported feeding of the work to be cut while enhancing the tracking of the belt while feeding work thereon. See c. 4, ll. 30-41 and *Id.* Thus, it would have been obvious to the ordinary artisan at the time of the instant invention to provide the modified device of Chambers with the work bed and groove as taught by Baranski in order to facilitate positive tracking of the endless belt in the region of work load wherein the work is not supported by the pulleys.

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Claims 16, 17, 23, and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chambers in view of Conrad and Baranski as applied to claims 15, 18-22, and 25-32 above,³ and further in view of Zimmerman.

Regarding claim 16, the modified device of Chambers discloses the invention substantially as claimed except that Chambers lacks specific details of driving the respective conveyors, i.e. driving of certain pulleys by a single power unit. However, Zimmerman teaches that driving of conveyors by a single power unit is a well known driving means in the art. More specifically, Zimmerman teaches a power unit (44) driving the input-side pulley (e.g. at 40c) of the output conveyor (36) and the output-side pulley (e.g. at 40d) of the input conveyor (38) wherein the other pulleys of the respective pairs are passively driven by the driven pulleys and further wherein positively driven pulleys are driven at the same speed so as to feed the material through the processing unit at a uniform rate. Fig. 3. Thus, it would have been obvious to the ordinary artisan at the time of the instant invention to provide the modified device of Chambers with the conveyor driving arrangement as taught by Zimmerman in order to facilitate a simple drive for uniform rate of movement of the material through the processing apparatus.

Regarding claim 23, the modified device of Chambers discloses the invention substantially as claimed except for at least one hold-down member. However, both Baranski and Zimmerman teach that hold-down members are old and well known in the art to facilitate clamped feeding engagement of the material being fed. Note the hold

³ The Board's attention is respectfully directed to the fact that the Examiner erroneously did not include Conrad in the rejection of these claims in the last Office Action. It is respectfully submitted that it is clear

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down member 98 in Figs. 1 and 4, c. 4, l. 59 - c. 5, l. 18, in Zimmerman. Note the hold down members 86 in Fig. 3 of Baranski. Thus, it would have been obvious to the ordinary artisan at the time of the instant invention to provide the modified device of Chambers with the hold down members as taught by Baranski and Zimmerman combined in order to facilitate clamped feeding engagement of the material being processed.

(11) Response to ArgumentRe: First Issue

In response to Appellant's basic argument that the claims 15, 18-22, and 25-32 are not obvious in view of the applied references,⁴ this argument is traversed.

First, the Appellant basically contends that Chambers does not inherently include a pair of input-side and output-side pulleys and the Examiner has not provided a basis in fact and/or reasoning.⁵ The Examiner contends to the contrary. As shown in Fig. 1 of Chambers, Chambers shows an input-side conveyor (10) and an output-side conveyor (20). Note that Chambers only shows *one* pulley for each side, i.e. the circular roller shapes representing the pulley. However, for a pulley system or conveyor to function as intended, there must be more than one pulley for the endless belt on each respective side as is well known in the mechanical arts. Otherwise, no movement of the belt around the shown pulleys in Chambers would be possible. Thus, the Examiner's contention that a *pair* of pulleys for each side is inherent in the system taught by

from the context of the basis of the rejection that Conrad should have been included herein.

⁴ Brief, p. 7, l. 10 - p. 12, l. 22.

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Chambers. In the alternative, this issue is rendered obvious by the teachings of Conrad and Baranski.

Second, the Appellant basically contends that even though aspects of the invention are individually known, the Examiner has not provided objective reason why it would be obvious to combine this feature in the claimed manner.⁶ Initially, the fact that Chambers already teaches endless belt conveyors for both the input-side and output-side of the work conveying system provides a *prima facie* case of obviousness to one of ordinary skill in the art to utilize other endless belt designs. Moreover, the fact that the Appellant acknowledges in the specification that the endless belt, as claimed to the extent as it relates to the specific features of the belt, is a commercially available product which presumably would lead one of ordinary skill in the art that the belt itself is an obvious substitute for the belt shown in Chambers.

Third, in response to Appellant's basic argument that there is no suggestion to combine the references,⁷ the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine stem from all the applied references. As noted above, Chambers already teaches endless belt conveyors for both the input-side and output-side of the

⁵ *Id.*, p. 8, ll. 1-6.

⁶ *Id.*, p. 8, ll. 7-13.

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work conveying system. Conrad teaches a notched belt and paired pulleys for the same wherein the notches in each longitudinal row define a strip and each pulley has an annular groove with a shape conforming to the shape of the strip for insure maximum flexibility and training of the belt around the pulleys during operation. Conrad clearly teaches the features noted supra for conveyance yet does not specifically teach utilizing the same in a sawing, i.e. the claimed "processing", environment. However, Baranski teaches using a pair of pulleys with each having an annular groove for an endless belt having a strip in substantially the same manner and process, i.e. the sawing art, as the conveyors in Chambers. Thus, in view of the teachings of Conrad and Baranski *combined*, it would have been obvious to the ordinary artisan to modify Chambers in the manner expressed in the rejection.

Appellant contends in the first and second points of argument that the Examiner has taken disparate teachings, e.g. Conrad and Baranski and notched vs. continuous strip, for the proposed combination which would lead the ordinary artisan away from the modification. However, that would only be true if the Examiner modifies Chambers in the argued manner, i.e. Chambers/Conrad and then Baranski. Appellant's and Board's attention is respectfully directed to the fact that in the rejection at bar, it is Chambers modified by the *combined* teachings of Conrad and Baranski as opposed to the argued manner. Thus, Appellant's arguments in that vein misses the mark.

Appellant basically contends in the third and fourth points of argument that somehow the combination is not possible with respect to Baranski because of the orientation of the belt and pulleys, i.e. vertical, and there is no specific teachings, i.e.

⁷ *Id.*, p. 8, l. 14 - p. 12, l. 22.

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explicit recitation in Baranski's specification, for the tracking aspect as the Examiner stated in the rejection. However, it is the Examiner's position that the combined teachings of Conrad and Baranski would lead the ordinary artisan to infer that besides the contention by the Appellant that the ridge, i.e. the claimed "strip" aspect of the belt, and the grooved pulleys support the belt against gravity, the grooves and the ridge/strip also maintains tracking of the belt around said grooves. In the sawing art utilizing endless conveyors, it behooves the ordinary artisan to insure that the belts do not shift laterally with respect to the pulleys especially since these conveyors feed the work through the processing station and consequently supports the cut product.

In response to Appellant's basic argument that Conrad does not teach the "without contacting" limitation of claims 19-21,⁸ this argument is traversed. Figs. 2-3 of Conrad shows the belt having two layers, layer (35) and web (28). With respect to these claims, the interface between these layers is construed as reading on the "opposing surface" limitation based upon a reasonably broad interpretation of the claimed features.

In response to Appellant's basic argument that claims 28-30 are separately patentable,⁹ this argument is traversed. Appellant's contention is couched on the assertion that vertical orientation as shown in Baranski would detract from the combination proposed by the Examiner. However, as noted *supra*, the work bed is not for the sole purpose of supporting the ridge against gravity. It is clear from the teachings of Baranski that the work bed also supports the work between the pulleys.

⁸ *Id.*, p. 11, ll. 14-20.

⁹ *Id.*, p. 11, l. 23 - p. 12, l. 9.

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For example, due to the fact that the workpiece is clampingly engaged by the pressure rollers (86 - Fig. 3), the absence of the work bed would create a problem of having a stable conveying surface for the workpiece when the same is fed through the processing station, i.e. the leading portion of the workpiece would "dip" or "bow" the supporting portion of the belt by the action of the clamp rollers in the absence of a firmer support underneath the belt. Moreover, it is old and well known in the endless conveyor art that the belt would be tensioned so as to insure that the belt will move by the rotation of the pulleys. Note the tensioning mechanism (e.g. at 134) in Fig. 3 of Baranski. However, such tensioning of the belt would be insufficient to support the workpiece that is clamped by the rollers (86), since if Baranski's belt was to be tensioned to that extent, it would be difficult and inefficient for the motor (78) to even rotate pulleys as is well known in the art. Moreover, the teachings and suggestions of Baranski are equally applicable for conveyance in the horizontal direction since the belt would experience forces both from gravity as well as the workpiece laid thereon. Furthermore, due to the reasons enumerated above, the modification as proposed by the Examiner would insure proper conveyance for all lengths of workpieces being processed since any potential "sagging" of the belt between the pulleys would be prevented by the robust structure of the work bed supporting the belt.

In response to Appellant's basic argument that claim 32 is separately patentable,¹⁰ this argument is traversed. The combined teachings of Conrad and Baranski renders this argument moot, since vertical orientation of the conveyor in Baranski was not the teachings relied on in rejection of this claim, and therefore, not

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germane to this issue. Appellant is reminded that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Re: Second Issue

In response to Appellant's basic argument that claim 17 is separately patentable,¹¹ this argument is traversed. It is clear from Zimmerman, as noted in the rejection, that all of the pulleys are driven by one motor (44 - Fig. 3). The pulley (at 40c) is driving while all the other pulleys are rotating or driven by the action of the driving pulley, i.e. they are passively driven because the driven pulley (40c) is directly affected by the motor while the other pulleys are not. Moreover, comparison of Figs. 1-2 of the instant invention with Fig. 3 of Zimmerman shows the same type of drive train.

For the above reasons, it is believed that the rejections should be sustained.

¹⁰ *Id.*, p. 12, ll. 11-20.

¹¹ *Id.*, p. 13, ll. 9-15.

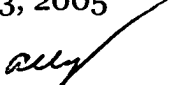
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Respectfully submitted,

cg

November 23, 2005

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